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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,634	09/13/2000	Shirwan Alpasha Al Bahdaini		5682

7590 06/08/2005

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EXAMINER

TRIEU, THAI BA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No.	Applicant(s)	
	09/582,634	AL BAHDAINI, SHIRWAN ALPASHA	
	Examiner	Art Unit	
	Thai-Ba Trieu	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 55-73 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 55-73 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

This Office Action is in response to the Amendment filed on April 14, 2005.

Claims 1-54 were cancelled; and claims 55-73 were added.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR 1.71(a)-(c):

(a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

(b) The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions and from what is old. It must describe completely a specific embodiment of the process, machine, manufacture, composition of matter or improvement invented, and must explain the mode of operation or principle whenever applicable. The best mode contemplated by the inventor of carrying out his invention must be set forth.

(c) In the case of an improvement, the specification must particularly point out the part or parts of the process, machine, manufacture, or composition of matter to which the improvement relates, and the description should be confined to the specific improvement and to such parts as necessarily cooperate with it or as may be necessary to a complete understanding or description of it.

The specification is objected to under 37 CFR 1.71 because of failing to provide an adequate written description of the invention.

Claim 56 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically,

- In claim 56, line 9, the recitation of ***“use as a novelty”*** lacks a proper explanation why the engine designed is used as a novelty and which operating way is considered to be a novelty use?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

1. Claims 55, and its dependent claims 56-73 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Applicant should review all of claims in record and make correction in compliance with 35 U.S.C. 112, second paragraph 2. Specifically,

- a. In claim 55, lines 20-22, the recitation of ***“wings aligned aerodynamically to remove escaping gas from its flywheel chamber by implementing physical influence by relevant Bernoulli’s concept”*** renders the claim indefinite, since it is not clear that how the Bernoulli’s concept is

relevant to the implementing physical influence, and why the facing cavity contains wings to be aligned aerodynamically for removing escaping gases from the flywheel chamber?

b. In claim 58, the recitation of ***“physical reaction that would be inverted to create influence increasing the rotation speed of the flywheel(s) therewith in the engine”*** renders the claim indefinite, since it is not clear that when the physical reaction is inverted to create influence, and when the physical reaction is not inverted to create influence. These conditions are required to be defined.

c. In claim 61, the recitation of ***“using principle of puffing air”*** renders the claim indefinite, since it is not clear that which principle(s) is/are used to puff the air inside each chamber, such as aerodynamic principle, physic principle, or principle of fluid mechanics?

d. In claim 62, the recitation of ***“principle of independent oil servicing for each piston”*** renders the claim indefinite, since it is not clear that which relative principle is used to applied for delivering oil into each piston?

e. In claim 66, lines 1-2, the recitation of ***“the engine having a discipline seated to facilitated ways in regulating and adjusting all engine activities”*** renders the claim indefinite, since it is not clear that how many ways and which way (s) is/are considered to be facilitated one(s) in order to be used as an adjustment and a regulation the engine activities. Additionally, which activity(ies)

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of the engine are to be referenced to. Applicant is required to identify each activity of the engine.

2. Claim **56** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

3. Regarding claim 55, line 9, the word "**means**" is preceded by the word(s) "**to form hydraulic sliding rod pump**" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title. Undue experimentation requires imposed on one having ordinary skill in the art to make or use the invention.

Claims 55-73 are rejected under 35 U.S.C. 101 because the invention as disclosed is inoperative and therefore lacks utility. Applicant's invention belongs to a class of devices known as "closed pocket turbines" which are categorically inoperative. The definition of class 60, subclass 39.44 ("Closed Pocket Turbines") states that motive

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fluid introduced into these closed pockets is trapped therein, and while so trapped, is incapable of exerting any useful energy release by expansion, impulse or reaction. Engines of this type are considered to be inoperative to produce useful power.

The effective area of each pocket on which the pressure can act is the area of the leading and trailing pocket faces projected on a radial plane. This projected area is the same for both faces. The tendency to rotate is equal and opposite, and therefore there will be no rotation in the desired direction. The direction of the resultant force of the pressure in each pocket is radial, through the axis of the rotor, and therefore there is no tangential component of force. The existence of such a tangential force balance is completely independent of the shape of the rotor pocket.

In order to obtain useful power from the gases generated, said gases must be allowed to expand against a movable wall and exert forces of expansion by static pressure in a confined expansible space such as between a cylinder and a piston, or a high velocity jet of gas must be provided which is free to impact against vanes and immediately escape. In applicant's device there is no expansion of the gases because the volume of each pocket remains constant as the rotor rotates, also the high velocity jet of gas is not free to impact against vanes and immediately escape.

Since the intended mode of operation of applicant's device appears to conflict with well-known and accepted principles, the presumption of inoperativeness is so strong that very clear evidence is required to overcome it. Therefore, applicant is required to submit a working model and/or affidavits from qualified, unbiased and disinterested persons who are familiar with the general principles involved in the

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operation of the device, attesting to its operativeness. A qualified person is one having an advanced degree in physics or mechanical engineering from a leading university such as Stanford, or the California Institute of Technology, or Massachusetts Institute of Technology, and an understanding of the combustion processes in internal combustion engines.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 55-62, 64-67, and 69-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Hay et al. (Patent Number GB 349614).

Regarding claims 55-56, Hay discloses an internal combustion engine that is in a shape of electric motor, this engine comprising:

a case (G) having a cylindrical cavity comprising:

a central main crankshaft (D) disposing at least a freewheel (A), centrally mounted and geared thereon has external smooth circumference width to rotate coaxial therein its case (G) (See Figures 1, 2, and 4),

one or more cylindrical space is inside the flywheel (A) on center-side has a plan of its central axis perpendicular on wheel's central line thereof defining a cylinder (J) with one side of its end length opened outwardly on angle 45°

or more at its wheel's tangent (See Figures 1 and 4; Page 1, lines 78-82), a piston (R) to move inside it fixed with the closed end of said cylinder by an elastic spring (T) to provide differential free linear movement for the piston due to resisting any stress while consisting a means to form a rod pump therein for servicing oil into piston wall thereon, defining piston's push-arm (S) (See Figures 1, 2, and 4), the vacuum which is surrounded by piston's chamber (Not Numbered), circular non-penetrated seals (Read as a film or lubricating medium) fixed and to be interlocked on two side edges of flywheel circumference with the case (See Page 1, lines 52-68), three or more groups of seal mass affixed on a radial location on case cavity facing and contacting the flywheel circumference width designed to isolate each revolution into three zones or performance modes relatively to the chamber as conducted by its flywheel rotating therewith, a rotation is to have a chamber firstly be fed with air-fuel mixture by inlet (L) via inlet valve (O) in a feeding zone, to pass secondly on sparking of ignition zone of plug(s) (Q), to exploding its fuel-mixture to act on its piston by a stress to depress it downward while resisting it by its piston's push-arm while transferring a potential force to its cylinder base to act as a side force on its flywheel thereon causing a rotation power, then a chamber will pass thirdly on exhaust zone of opening (P) on the facing case cavity wall which contains wings aligned aerodynamically to remove escaping gases from its flywheel chamber by implementing physical influence by relevant Bernoulli's concept with inlet valve (O) for puffing air to scavenge and to clean said chamber from its remaining

exhaust gases, these performances will be repeated for each chamber as its revolution will continue, while pressured air-fuel mixture is to be fed to the chamber(s) using compressor that has air store and working in association of its engine to supply this feeding mission and the puffing mission done by a network of pipes, a fuel spraying device as carburetor, or by fuel injecting device with other accessories, ignition distributor associated with crankshaft rotation, inlet valves (O) have their relevant mechanical timing control by edge(s) of circular light metal pad(s) which is mounted surrounding each side of its flywheel and coinciding with it, used also for oil and cooling services (See Page 3, lines 16-17 and 47-59) containing radius grooves to discharge oil outwardly from the central oil canal inside a central oil supply canal servicing engine parts including the piston(s) via its rod pump in its push-arm working relatively downwardly and upwardly with its motions linked by a central oil canal via flywheel oil intake hole, serving oil to piston to flows back via flywheel side outlet to its side pad to outwardly case by implementing centrifuge concept, while cooling the case returning to the main oil tank which has an opening to the atmosphere to allow using the centrifugal concept.

Note that the recitation of "these performances will be repeated for each chamber as its revolution will continue, while pressured air-fuel mixture is to be fed to the chamber(s) using compressor that has air store and working in association of its engine to supply this feeding mission and the puffing mission done by a network of pipes" is considered as the functional language. Hay discloses all the structural components of

an engine system, which are read on those of the instant invention. Therefore, the Hay system is capable of performing the same desired functions as the instant invention having been claimed in claims 55-56.

Regarding claim 57, Hay further discloses stroke piston (R) displacements in downward or upward motions that will act positively, during the performance to be beneficial on the engine output (See Figures 1 and 4).

Regarding claims 58-62, 64, and 66, the recitations of "a feature of using the potential aerodynamic reactions of exhaust gases to increase the automotive power on engine output, by using a technique of aerodynamically modified exhaust openings outlet to create physical reaction that would be inverted to create influence increasing the rotation speed of the flywheel(s) therewith in the engine"; "a feature of an ability to use a boosted compressed air-fuel mixture in feeding chambers, which distributed on flywheel(s) edge each of independent performance for executing fuel combustion energy therein to act therefore as rotating force on their relevant flywheel(s) thereon to let the expelling exhaust gases of each chamber to play a part to increase rotations on each flywheel"; "allowing independent performance of engine parts by regulating feeding of fuel- mixture into each chamber as placed on its flywheel (s)"; "using principle of puffing air inside each chamber on the piston cup directly at the end of exhaust stroke while hot in expelling exhaust gases"; "using a Centrifugal concept in highly speeds, to reduce the fuel consumption"; and "the engine having a discipline seated to facilitated ways in regulating and adjusting all engine activities" are

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considered as the functional language. Hay discloses all the structural components of an engine system, which are read on those of the instant invention. Therefore, the Hay system is capable of performing the same desired functions of using the potential reactions of exhaust gases and using a technique of aerodynamically modified exhaust openings outlet; an ability to use a boosted compressed air-fuel mixture in feeding chambers; allowing independent performance of engine parts; and using principle of puffing air inside each chamber, as the instant invention has been claimed.

Note that Hay does not discloses the Centrifugal concept; however, the Centrifugal concept is inherently recognized as the Hay machine is rotating.

Regarding claim 65, Hay further discloses using valves for chambers, controlled separately without using the essential articulated timing connection (See Page 1, lines 102-106, and Page 6, lines 1-11).

Regarding claim 67, the recitation of "the piston push-arms arc made of an elastic material is considered as a product by process claim, which is rejected over a prior art product that appears to be identical, although produced by a different process, the burden is upon the applicants to overcome forward with evidence establishing a obvious difference between the two. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983).

Regarding claims 69-71 and 73, Hay further discloses said engine being positioned vertically as its crank in vertical direction (See Figure2); a plurality of ignition

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spark plugs (Q) (See Figures 1-2); said engine is connect to other engines (See Figures 2); said engine has an air-fuel mixture feeding pipe (L) has controlled inlets to feed each pistons (R) of the engine by valve regulator (O) or management (See Figures 1-2, Page 1, lines 91-106, Page 2, lines 1-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 63 and 68 rejected under 35 U.S.C. 103(a) as being unpatentable over Hay et al. (Patent Number GB 349614), in view of Coignard Yvette (Patent Number FR 2 252 764).

Hay discloses the invention as recited above; however, Hay fails to disclose a flexible elastic push-arm for pistons with chambers placed on circular zone on flywheel(s) circumference; and a connected hydraulic system for two pistons in one wheel.

Coignard Yvette teaches that it is conventional in the internal combustion engine art, to utilize a flexible elastic push-arm for pistons with chambers; and a connected hydraulic system (12) for two pistons (19) in one wheel (See Figure 2, Page 1, lines 23-30, and Page 2, lines 22-31).

It would has been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized a flexible elastic push-arm for pistons with

chambers, and a connected hydraulic system for two pistons in one wheel, as taught by Coignard Yvette, to absorb sudden pressure impact on the piston and improve lubrication in the Hay device.

Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hay et al. (Patent Number GB 349614), in view of Wilson (Patent Number 3,769,793).

Hay discloses the invention as recited above; however, Hay fails to disclose said engine uses gasoline for a fuel.

Wilson teaches that it is conventional in the rotary engine art, to utilize gasoline as a fuel for operating the engine. (See Column 2, lines 46-49).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized gasoline as a fuel, as taught by Wilson, to improve the efficiency, in the Hay device.

Response to Arguments

Applicant's arguments filed April 14, 2005 have been fully considered but they are not persuasive. Accordingly claims 55-73 are pending.

1. Power of Attorney:

A power of Attorney authorizing the name of attorneys to act on behalf of the Applicant before the Patent Office for the instant case, filed on April 14, 2005, is acknowledged.

2. Request for In-Person Interview:

If applicant's representatives request for an in-person interview to discuss the subject matter of the application and the status of issues being raised by the Examiner, applicant's representatives should call the examiner and make an appointment.

3. Correction of Drawings:

The objections of Drawings have been withdrawn since applicant already addressed these issues.

4. The Claim Rejection under 35 U.S.C. 112:

The rejections of claims 33-54 under 35 U.S.C. 112, second paragraph are withdrawn, since the claims 33-54 have been cancelled by the Amendment filed on April 14, 2005.

5. The Substitute Abstract , the Substitute Specification, and New Claims:

a. The Substitute Abstract and the Substitute Specification are not entered because they contains new matter, such as the relation of using of the physical principle of escaping a space-ship from the earth gravity and the piston working in the closed pocket engine by employing the centrifugal concept.

b. Claim 55 is rewritten and contains new matters such as exhaust zone of opening containing wings aligned aerodynamically to remove escaping

gases... by implementing physical influence by relevant Bernoulli's concept, an opening to the atmosphere to allow using the centrifuge concept, etc...

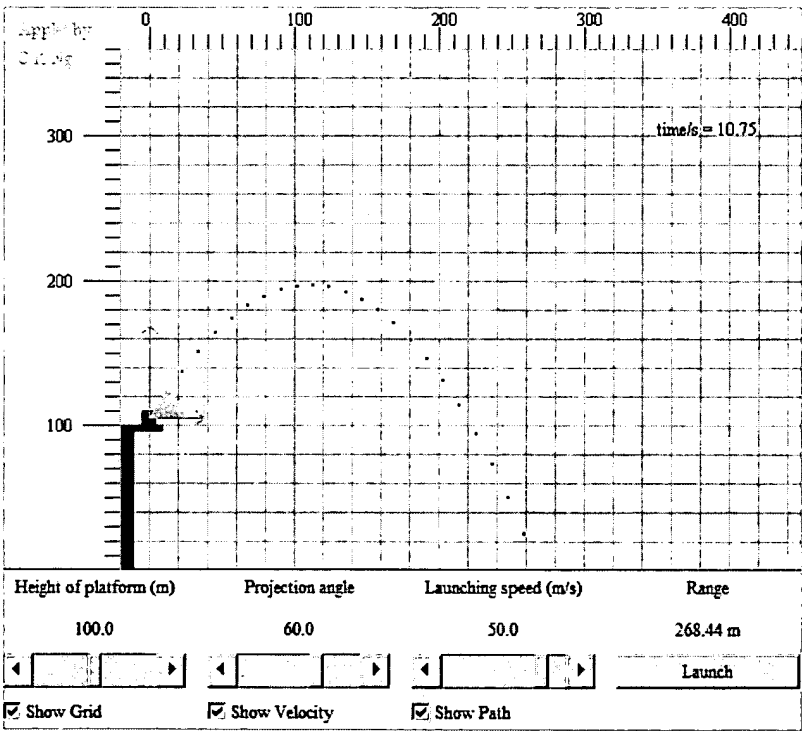
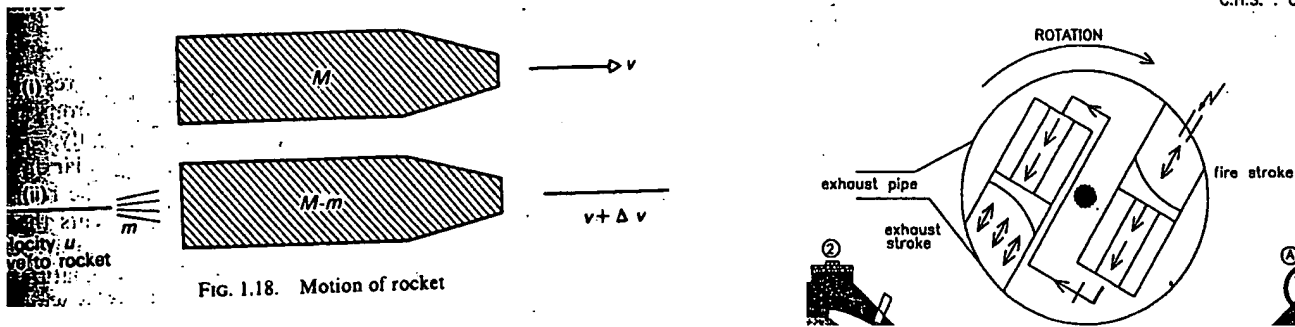
6. Claim Rejections under 35 U.S.C. 101:

a. Claims 55-73 are rejected under 35 U.S.C. 101 set forth above.

b. In third Paragraph of page 11, applicant states: "applicant has built his main concept of introducing combustion power inside the chambers of this device to be utilized for output from the investing basis of an old simple principle still used until now which is used for fabricating the traditional gun weapon started a long time ago by using a black powder explosion for guns to throw projectiles. While a static situation..., such clear concept applied on automotive engine...; substituting that body by a flexible elastic traveling piston to allow gases to expand or to relatively be partially released causing impulse reaction acting on a face (of piston) imposing certain power on a direction of center-side of flywheel thereon (instead of throwing a body); by those pressurized gases of fuel mix explosion as a first stage then released but oppositely at exhaust 2nd stage."

Examiner respectfully disagrees with the applicant, since the applicant has applied the concept of using a black powder explosion for guns to throw projectile bodies in explaining the rotation movement of the flywheel with substituting the projectile body by an elastic traveling piston to allow gases to expand or partially released causing impulse. How can a projectile movement of a body be related to the rotational movement of a flywheel/rotor? By the definition, projectile motion

refers to the motion of an object projected into the air at an angle. A few examples of this include a soccer ball begin kicked, a baseball begin thrown, or an athlete long jumping. Even fireworks and water fountains are examples of projectile motion.



Projectile motion

c. In the fourth and fifth paragraphs of page 11, applicant argues why his invention is different to the closed pockets as cited by the examiner. Applicant states that "a logical comparison could recognize a kind of chamber for closed packet turbines which are surrounded by fixed faces (or vanes) unable to expand due to explosion power inside which trapped therein without any useful energy release. Chambers of this current art device which are disciplined for each to have one flexible face to expand downwardly (a face against the ignition) along a cylindrical bore therein, due to a mix explosion occurring inside. Such moving face, presented by a flexible elastic traveling piston for each releases a potential useful reaction from expansion of gases as a result of the explosion through a desired direction projected (as designed) on center-side of a flywheel thereon to act as a torque power on it."

Examiner respectfully disagrees with the applicant since applicant argues the features, which **are not recited in the rejected claim(s)** (for example, the recitation of "*chambers of this current art device which are disciplined for each to have one flexible face to expand downwardly (a face against the ignition) along a cylindrical bore therein*"). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

d. In the third Paragraph of Page 12, applicant states that "the Examiner requested an affidavit from a qualified independent person and defined a

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qualified person as one having an advanced degree in physics or mechanical engineering from a leading university such as Stanford the California Institute of Technology, or Massachusetts Institute of Technology. Thee Applicant is not sure just these schools as many other schools have excellence physic and engineering programs.”

The rejection of claims 33-54 in the Office Action mailed on October 14, 2005 and the rejection of claims 55-73 in the present Office Action **under 35 U.S.C. 101** have stated that “*applicant is required to submit a working model and/or affidavits from qualified, unbiased and disinterested persons who are familiar with the general principles involved in the operation of the device, attesting to its operativeness. A qualified person is one having an advanced degree in physics or mechanical engineering from a leading university such as Stanford, or the California Institute of Technology, or Massachusetts Institute of Technology, and an understanding of the combustion processes in internal combustion engines.*” There are possibilities for applicant to choose:

- Firstly, applicant is required to submit a working model to show and support that the engine is an operative one.
- Secondly, applicant is required to submit affidavits from qualified, unbiased and disinterested persons who are familiar with the general principles involved in the operation of the device, attesting to its operativeness.

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- Thirdly, applicant is required to submit a working model and affidavits from qualified, unbiased and disinterested persons who are familiar with the general principles involved in the operation of the device, attesting to its operativeness.

Additionally, *Stanford, or the California Institute of Technology, or Massachusetts Institute of Technology* are suggested names of some Universities in the United States of America, which have provided excellent physics and engineering programs. Applicant can also select the other Universities in the United States of America such as Worcester Polytechnic Institute, Drexel University, Penn State Universities and etc...

e. The Claim Rejection under 35 U.S.C. § 102:

On page 12, Applicant respectfully traverse the rejection of claims 1-3 under 35 U.S.C. § 102 based on GB 349614 to Hay, FR 2,252,764 to Yvette, and FR 2,229,274 to Paul for the reasons provided on pages 9- 12 of the Office Action mailed on June 29, 2001. Examiner believes that no response should be made since claims 1-3 were cancelled.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (571) 272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
June 01, 2005



Thai-Ba Trieu
Primary Examiner
Art Unit 3748